

Ethnicity, Sex, and Socio-Economic Disparities in the Treatment of Traumatic Rotator Cuff Injuries in Aotearoa/New Zealand

Scott Matthew Bolam, Subhajt Konar, Greg David Gamble, Sarah Jane Paine, Nicola Dalbeth, Andrew P Monk, Brendan Coleman, Jacob Munro, David Musson¹

¹University of Auckland

INTRODUCTION: Traumatic rotator cuff injuries can be a leading cause of prolonged shoulder pain and disability, and contribute to significant morbidity and healthcare costs. Previous studies have shown evidence of socio-demographic disparities with these injuries. The purpose of this nationwide study was to better understand these disparities based on ethnicity, sex, and socio-economic status, in order to inform future healthcare strategies.

METHODS: Accident Compensation Corporation (ACC) is a no-fault comprehensive compensation scheme encompassing all of Aotearoa/New Zealand (population in 2018, 4.7 million). Using the ACC database, traumatic rotator cuff injuries were identified between January 2010 and December 2018. Injuries were categorized by sex, ethnicity, age, and socioeconomic deprivation index of the claimant.

RESULTS: During the 9-year study period, there were 351,554 claims accepted for traumatic rotator cuff injury, which totaled over \$960 million New Zealand dollars. The greatest proportion of costs was spent on vocational support (49.8%), then surgery (26.3%), rehabilitation (13.1%), radiology (8.1%), general practitioner (1.6%), and "Other" (1.1%). Asian, Māori (Indigenous New Zealanders), and Pacific peoples were under-represented in the age-standardized proportion of total claims and had lower rates of surgery than Europeans. Māori had higher proportion of costs spent on vocational support and lower proportions spent on radiology, rehabilitation, and surgery than Europeans. Males had higher number and costs of claims and were more likely to have surgery than females. There were considerably fewer claims from areas of high socio-economic deprivation.

DISCUSSION AND CONCLUSION: This large nationwide study demonstrates the important and growing economic burden of rotator cuff injuries. Indirect costs, such as vocational supports, are a major contributor to the cost suggesting improving treatment and rehabilitation protocols would have the greatest economic impact. This study has also identified socio-demographic disparities which need to be addressed in order to achieve equity in health outcomes.